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1 [Video and image: Exploiting ontologies for automatic image annotation](#)

Munirathnam Srikanth, Joshua Varner, Mitchell Bowden, Dan Moldovan

 August 2005 **Proceedings of the 28th annual international ACM SIGIR conference on Research and development in information retrieval SIGIR '05**

 Full text available: pdf(147.19 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Automatic image annotation is the task of automatically assigning words to an image that describe the content of the image. Machine learning approaches have been explored to model the association between words and images from an annotated set of images and generate annotations for a test image. The paper proposes methods to use a hierarchy defined on the annotation words derived from a text ontology to improve automatic image annotation and retrieval. Specifically, the hierarchy is used in the c ...

Keywords: automatic image annotation, hierarchical classification models, image retrieval, ontologies, translation models

2 [System papers: interface generation and annotation tools: A collaborative annotation system for data visualization](#)

Sean E. Ellis, Dennis P. Groth

 May 2004 **Proceedings of the working conference on Advanced visual interfaces**

 Full text available: pdf(266.38 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We present Collaborative Annotations on Visualizations (CAV), a system for annotating visual data in remote and collocated environments. Our system consists of a network framework, and a client application built for tablet PC's. CAV is designed to support the collection and sharing of annotations, through the use of mobile devices connected to visualization servers. We have developed a working system prototype based on tablet PC's that supports digital ink, voice and text annotation, and illustr ...

Keywords: Computer Supported Collaborative Visualization (CSCV), Computer Supported Collaborative Works (CSCW), annotation, visualization

3 [Improving interaction: On electronic annotation and its implementation](#)

Daniela Fogli, Giuseppe Fresta, Piero Mussio

 May 2004 **Proceedings of the working conference on Advanced visual interfaces**

Full text available:

Additional Information:

 [pdf\(268.27 KB\)](#)[full citation](#), [abstract](#), [references](#), [index terms](#)

Electronic document and electronic annotation evolve and complement the traditional document and annotation in recording, developing and making available community knowledge. This paper discusses electronic annotation and its importance as a tool for two way exchange of ideas among humans pursuing a common goal. The discussion is performed by presenting an example in the Earth science field.

Keywords: characteristic structure, electronic annotation, electronic document, virtual entity

4 [Improving interaction: Integrating expanding annotations with a 3D explosion probe](#)

Henry Sonnet, Sheelagh Carpendale, Thomas Strothotte

May 2004 **Proceedings of the working conference on Advanced visual interfaces**

Full text available:  [pdf\(427.74 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Understanding complex 3D virtual models can be difficult, especially when the model has interior components not initially visible and ancillary text. We describe new techniques for the interactive exploration of 3D models. Specifically, in addition to traditional viewing operations, we present new text extrusion techniques combined with techniques that create an interactive explosion diagram. In our approach, scrollable text annotations that are associated with the various parts of the model can ...

Keywords: 3D model exploration, expanding annotations, explosion diagram, interaction design

5 [Improving interaction: MADCOW: a multimedia digital annotation system](#)

Paolo Bottoni, Roberta Civica, Stefano Levialdi, Laura Orso, Emanuele Panizzi, Rosa Trinchese

May 2004 **Proceedings of the working conference on Advanced visual interfaces**

Full text available:  [pdf\(396.57 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Digital annotation of multimedia documents adds information to a document (e.g. a web page) or parts of it (a multimedia object such as an image or a video stream contained in the document). Digital annotations can be kept private or shared among different users over the internet, allowing discussions and cooperative work. We study the possibility of annotating multimedia documents with objects which are in turn of multimedial nature. Annotations can refer to whole documents or single portions t ...

Keywords: annotation, multimedia document, plug-ins

6 [Supporting personalization: Exploring the relationship between personal and public annotations](#)

Catherine C. Marshall, A. J. Bernheim Brush

June 2004 **Proceedings of the 4th ACM/IEEE-CS joint conference on Digital libraries**

Full text available:  [pdf\(486.50 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Today people typically read and annotate printed documents even if they are obtained from electronic sources like digital libraries. If there is a reason for them to share these personal annotations online, they must re-enter them. Given the advent of better computer support for reading and annotation, including tablet interfaces, will people ever share their personal digital ink annotations as is, or will they make substantial changes to them? What can we do to anticipate and support the transit ...

Keywords: annotation, annotation system design, collaboration, digital library use,

education, online discussion, reading


- 7 Late breaking result papers: Digital graffiti: public annotation of multimedia content
Scott Carter, Elizabeth Churchill, Laurent Denoue, Jonathan Helfman, Les Nelson
April 2004 **CHI '04 extended abstracts on Human factors in computing systems**

Full text available:  pdf(318.91 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Our physical environment is increasingly filled with multimedia content on situated, community public displays. We are designing methods for people to post and acquire digital information to and from public digital displays, and to modify and annotate previously posted content to create publicly observable threads. We support in-the-moment and on-site "person-to-place-to-people-to-persons" content interaction, annotation, augmentation and publication. We draw design inspiration from field work o ...

Keywords: annotation, blogging, digital community poster boards, threaded discussion


- 8 Demo experience: Vidya: an experiential annotation system
Bageshree Shevade, Hari Sundaram
November 2003 **Proceedings of the 2003 ACM SIGMM workshop on Experiential telepresence**

Full text available:  pdf(478.93 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper, we present a novel annotation paradigm with an emphasis on two facets -- (a) the end user experience and (b) semantic propagation. The annotation problem is important since media semantics play a key role in new multimedia applications. However, there is currently very little incentive for end users to annotate. The annotation system, is interactive and experiential. We attempt to propagate semantics of the annotations, by using WordNet, a lexicographic arrangement of words, and lo ...

Keywords: annotation, experiential, hyper-mediation, semantic propagation, serendipity

- 9 Multimedia and hypermedia: Using SMIL to encode interactive, peer-level multimedia annotations
Dick C. A. Bulterman
November 2003 **Proceedings of the 2003 ACM symposium on Document engineering**

Full text available:  pdf(131.84 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper discusses applying facilities in SMIL 2.0 to the problem of annotating multimedia presentations. Rather than viewing annotations as collections of (abstract) meta-information for use in indexing, retrieval or semantic processing, we view annotations as a set of peer-level content with temporal and spatial relationships that are important in presenting a coherent story to a user. The composite nature of the collection of media is essential to the nature of peer-level annotations: you ...

Keywords: SMIL, annotation, horses, medical systems

- 10 Reception and posters: On image auto-annotation with latent space models
Florent Monay, Daniel Gatica-Perez
November 2003 **Proceedings of the eleventh ACM international conference on**

Multimedia

Full text available:  [pdf\(276.75 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Image auto-annotation, i.e., the association of words to whole images, has attracted considerable attention. In particular, unsupervised, probabilistic latent variable models of text and image features have shown encouraging results, but their performance with respect to other approaches remains unknown. In this paper, we apply and compare two simple latent space models commonly used in text analysis, namely Latent Semantic Analysis (LSA) and Probabilistic LSA (PLSA). Annotation strategies for e ...

Keywords: automatic annotation of images, semantic indexing

11 Poster papers - short papers: Digital annotation of printed documents

Corsin Decurtins, Moira C. Norrie, Beat Signer

November 2003 **Proceedings of the twelfth international conference on Information and knowledge management**

Full text available:  [pdf\(281.67 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We present a general model and information server for the digital annotation of printed documents. The resulting annotation framework supports both informal and structured annotations as well as context-dependent services. A demonstrator application for mammography that features both enhanced writing and reading activities is described.

Keywords: augmented paper, cross-media annotation, mammography

12 Image retrieval: A bootstrapping approach to annotating large image collection

HuaMin Feng, Tat-Seng Chua

November 2003 **Proceedings of the 5th ACM SIGMM international workshop on Multimedia information retrieval**

Full text available:  [pdf\(438.28 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Huge amount of manual efforts are required to annotate large image/video archives with text annotations. Several recent works attempted to automate this task by employing supervised learning approaches to associate visual information extracted in segmented images with semantic concepts provided by associated text. The main limitation of such approaches, however, is that large labeled training corpus is still needed for effective learning, and semantically meaningful segmentation for images is in ...

Keywords: active learning, bootstrapping, co-training, image annotation

13 Video retrieval: The Family Video Archive: an annotation and browsing environment for home movies

Gregory D. Abowd, Matthias Gauger, Andreas Lachenmann

November 2003 **Proceedings of the 5th ACM SIGMM international workshop on Multimedia information retrieval**

Full text available:  [pdf\(447.13 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We present the Family Video Archive as a tool to give consumers the ability to annotate and browse large collections of informal family movies. The informal nature of home movies makes it difficult to use fully-automated techniques for scene detection and annotation. Our system explores the symbiosis between automated and manual techniques for annotation.

We also explore the use of a zooming interaction paradigm for browsing and filtering large collections of video scenes.

Keywords: home movies, video annotation, zooming user interfaces

14 ANNA: towards a language for annotating Ada programs

Bernd Krieg-Brückner, David C. Luckham

November 1980 **ACM SIGPLAN Notices , Proceeding of the ACM-SIGPLAN symposium on Ada programming language**, Volume 15 Issue 11




Full text available:  [pdf\(1.05 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

ANNA is a proposal to extend Ada to include facilities for formally specifying the intended behaviour of Ada programs (or portions thereof) at all stages of program development. ANNA programs are Ada programs with formal comments. Formal comments in ANNA consist of virtual Ada text and annotations. The syntax and semantics of different kinds of annotations are defined: declarative annotations (for variables, subtypes, subprograms, and packages), statement annotations, ...

15 Fluid interaction techniques for the control and annotation of digital video

Gonzalo Ramos, Ravin Balakrishnan

November 2003 **Proceedings of the 16th annual ACM symposium on User interface software and technology**

Full text available:  [pdf\(3.03 MB\)](#)  [mov\(5:20 MIN\)](#)  [wmv\(5:20 MIN\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


We explore a variety of interaction and visualization techniques for fluid navigation, segmentation, linking, and annotation of digital videos. These techniques are developed within a concept prototype called *LEAN* that is designed for use with pressure-sensitive digitizer tablets. These techniques include a transient position+velocity widget that allows users not only to move around a point of interest on a video, but also to rewind or fast forward at a controlled variable speed. We also ...

Keywords: annotations, fluid interaction techniques, pen-based interfaces, video

16 Multimedia information retrieval: Automatic image annotation and retrieval using cross-media relevance models

J. Jeon, V. Lavrenko, R. Manmatha

July 2003 **Proceedings of the 26th annual international ACM SIGIR conference on Research and development in information retrieval**

Full text available:  [pdf\(539.83 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Libraries have traditionally used manual image annotation for indexing and then later retrieving their image collections. However, manual image annotation is an expensive and labor intensive procedure and hence there has been great interest in coming up with automatic ways to retrieve images based on content. Here, we propose an automatic approach to annotating and retrieving images based on a training set of images. We assume that regions in an image can be described using a small vocabulary of ...

Keywords: image annotation, image retrieval, relevance models

17

Hypermedia creation: Simplifying annotation support for real-world-settings: a

comparative study of active reading


Hartmut Obendorf

August 2003 **Proceedings of the fourteenth ACM conference on Hypertext and hypermedia**Full text available:  pdf(150.44 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Despite the multitude of existing interfaces for annotation, little is known about their influence on the created annotations. In this paper, first findings of a comparative video-supported study of active reading are presented. The support for active reading offered by traditional paper-and-pencil vs. two existing annotation tools for the World Wide Web is examined and possible implications for annotation systems are drawn. An immediate conclusion is the existence of a strong need for simplicity ...

Keywords: active reading, annotation, user study**18** Motion synthesis from annotations

Okan Arikan, David A. Forsyth, James F. O'Brien

July 2003 **ACM Transactions on Graphics (TOG)**, Volume 22 Issue 3Full text available:  pdf(4.98 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper describes a framework that allows a user to synthesize human motion while retaining control of its qualitative properties. The user paints a timeline with annotations --- like walk, run or jump --- from a vocabulary which is freely chosen by the user. The system then assembles frames from a motion database so that the final motion performs the specified actions at specified times. The motion can also be forced to pass through particular configurations at particular times, and to go to ...

Keywords: animation with constraints, clustering, human motion, motion synthesis, optimization**19** Robustness: Defensive programming: using an annotation toolkit to build DoS-resistant software

Xiaohu Qie, Ruoming Pang, Larry Peterson

December 2002 **ACM SIGOPS Operating Systems Review**, Volume 36 Issue SIFull text available:  pdf(2.13 MB) Additional Information: [full citation](#), [abstract](#), [references](#)

This paper describes a toolkit to help improve the robustness of code against DoS attacks. We observe that when developing software, programmers primarily focus on functionality. Protecting code from attacks is often considered the responsibility of the OS, firewalls and intrusion detection systems. As a result, many DoS vulnerabilities are not discovered until the system is attacked and the damage is done. Instead of reacting to attacks after the fact, this paper argues that a better solution i ...

20 Establishing the semantic web 11: On deep annotation

Siegfried Handschuh, Steffen Staab, Raphael Volz

May 2003 **Proceedings of the 12th international conference on World Wide Web**Full text available:  pdf(389.51 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The success of the Semantic Web crucially depends on the easy creation, integration and use of semantic data. For this purpose, we consider an integration scenario that defies core assumptions of current metadata construction methods. We describe a framework of metadata creation when web pages are generated from a database and the database owner is cooperatively participating in the Semantic Web. This leads us to the definition of

ontology mapping rules by manual semantic annotation and the usag ...

Keywords: annotation, information integration, mapping and merging, metadata, semantic web, wrapping

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IEEE CNF IEEE Conference Proceeding

IEE CNF IEE Conference Proceeding

IEEE STD IEEE Standard



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IEEE JNL IEEE Journal or Magazine

IEE JNL IEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEE CNF IEE Conference Proceeding

IEEE STD IEEE Standard

- ☐ 1. **Exploring the relationship between personal and public annotations**
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